

Remarks

Upon entry of the foregoing amendments, claims 1-15 and 17-19 are pending in the application. Claim 16 is sought to be canceled without prejudice or disclaimer of its subject matter. Claims 1-6, 8 and 10-15 are sought to be amended. These claims amendments find support throughout the application. Claims 17-19 are sought to be added. New claims 17-19 find support throughout the application.

The specification has been amended to indicate that this application is a 371 of PCT/GB00/00315 filed on February 3, 2000. In addition, section headings and an abstract on a separate page have been added.

Applicants respectfully submit that no new matter has been added by way of the above amendments. Applicants request that this Amendment be entered into the application prior to examination.

Respectfully submitted,

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Version with markings to show changes made

In the Specification:

On page 1, after the title, at the first line, a paragraph has been added to indicate that this application is a 371 of PCT/GB00/00315 filed on February 3, 2000 and published in English on August 10, 2000.

Section headings have been added to the specification at page 1, after the title; at page 1, line 7; at page 3a, line 5; and at page 22, line 4.

A "Brief Description of the Figures" section has been added at page 4, line 10, after which a section heading has been added.

In the Claims:

Claim 16 has been canceled without prejudice or disclaimer of the subject matter therein.

Claims 1-6, 8 and 10-15 have been amended as follows:

1. (Once amended) An assay for an analyte, comprising specifically associating the analyte with a thermostable reporter kinase, adding ADP and testing for formation of

ATP wherein, prior to addition of ADP, endogenous kinase other than reporter kinase is substantially removed by washing and the residual endogenous kinase [in the analyte] is inactivated by heating [the analyte].

2. (Once amended) [An] The assay [according to] of Claim 1, wherein the amount of reporter adenylate kinase specifically associated with the analyte is substantially proportional to the amount of analyte.

3. (Once amended) [An] The assay [according to any of Claims 1 or 2] of Claim 1 wherein formation of ATP is measured using luciferin/luciferase.

4. (Once amended) [An] The assay [according to any of Claims 1-3] of Claim 1 for determining presence and/or amount of an analyte in a sample, comprising exposing the sample to a reporter adenylate kinase coupled to a binding agent specific for the analyte, so that the reporter adenylate kinase is specifically associated with any analyte present in the sample;

removing reporter adenylate kinase that is not specifically associated with analyte; exposing reporter adenylate kinase specifically associated with the analyte to ADP; and

testing for formation of ATP,
wherein prior to addition of ADP residual adenylate kinase other than reporter adenylate kinase is substantially removed by heating.

5. (Once amended) [An] The assay [according to any of Claims 1-4] of Claim 1 comprising adding an ATPase to the analyte and removing the ATPase from the analyte prior to adding ADP.

6. (Once amended) [An] The assay [according to] of Claim 5 wherein the ATPase is inactivated by heating the ATPase.

8. (Once amended) [A] The kit [according to] of Claim 7 further comprising an ATPase.

10. (Once amended) [An] The assay [according to] of Claim 9, wherein substrate is converted into product by the thermostable enzyme and prior to addition of the substrate background compound identical to the product is removed.

11. (Once amended) [An] The assay [according to] of Claim 10 wherein background compound identical to the product is removed by the action of enzyme or by thermal inactivation.

12. (Once amended) A conjugate comprising an antibody conjugated to a thermostable enzyme for use in the assay of [any of Claims 1-6 and 9-11] Claim 1.

13. (Once amended) [A] The conjugate [according to] of Claim 12, wherein the enzyme is an adenylate kinase.

14. (Once amended) [A] The conjugate [according to] of Claim 12 [or 13],
wherein the antibody binds to an analyte selected from the group consisting of a protein, a
microorganism, a peptide, a toxin, a hormone and a metabolite.

15. (Once amended) [A] The conjugate [according to] of Claim 14 wherein the
antibody binds to a prion protein.

New claims 17-19 have been added.

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